WHAT IS CLAIMED IS:

1. A method of calibrating a printing system comprising:

(a) imaging a test pattern wherein the test pattern comprises a set of densities, wherein each density based on a plurality of exposures which have been randomized thereby forming an imaged test pattern;

(b) scanning the densities of the imaged test pattern thereby forming a dataset;

(c) analyzing the dataset to identify outlier data;

(d) if outlier data is identified, then the test pattern undergoes a second scan, a second dataset is formed and the second dataset is analyzed for outlier data;

(e) if no outlier data is identified, a first density point and a second density point of the dataset are computed to form an array of exposures versus a density between the first and second density points;

(f) forming a polynomial calibration curve from the array of exposures and the density array; and

(g) calibrating an adjustable density printing system using the polynomial calibration curve.

2. The method of claim 1, wherein the first density point is a toe density point.

3. The method of claim 2, wherein the second density point is a shoulder density point.

4. The method of claim 2, wherein the second density point is a desired density point for setting a maximum for the polynomial calibration curve.

5. The method of claim 2, calculating for a threshold of the density data to obtain the toe density point.

6. The method of claim 1, further comprising the step of laminating the test pattern onto a paper stock.

7. The method of claim 1, wherein the density of the test pattern is made from a thermal dye donor.

8. The method of claim 1, wherein the density of the test pattern comprises multiple colors.

9. The method of claim 1, wherein the test pattern is formed by a printing system comprising a printer, a laminator, a spectrometer or combinations thereof.

10. The method of claim 1, further comprising the step of removing data outside of three standard deviations from the polynomial calibration curve.

11. The method of claim 1, wherein after the step of forming a polynomial calibration curve from the array of exposures and the density array, a first slope is computed for density greater than the second density point.

12. The method of claim 12, wherein after the step of forming a polynomial calibration curve from the array of exposures and the density array, a second slope is computed for density less than the first density point.

13. The method of claim 12, wherein the first and second slopes are extensions of the polynomial calibration curve therein adapting the curve to be usable for extreme density ranges.

14. The method of claim 9, wherein the printing system comprises a laser thermal, silver halide, or an inkjet printer.

15. The method of claim 9, wherein the printing system comprises a digital printer.

16. The method of claim 9, wherein the printing system comprises a laser printer.

17. The method of claim 6, further comprising the step of subtracting paper density from the dataset enabling the calibration curve to be insensitive to the type of paper stock used in the printing system.

18. The method of claim 6, wherein the test pattern comprises an independent row for each set of densities and at least four points within a row comprise only paper density.